

American Journal of Physiology: Cell Physiology

No. 1. JULY 1998

INVITED REVIEW

- | | |
|---|----|
| Interaction of reactive oxygen species with ion transport mechanisms
<i>J. I. Kourie</i> | C1 |
|---|----|
-
- | | |
|---|------|
| Interferon- α and interferon- γ differentially affect pancreatic β -cell phenotype and function
<i>M. E. Baldeón, T. Chun, and H. R. Gaskins</i> | C25 |
| An analysis of Ca^{2+} release by DGEA: mobilization of two functionally distinct internal stores in Saos-2 cells
<i>T. J. McCann, G. Terranova, J. W. Keyte, S. S. Papaioannou, W. T. Mason, M. C. Meikle, and F. McDonald</i> | C33 |
| Vascular smooth muscle cell growth and insulin regulation of mitogen-activated protein kinase in hypertension
<i>N. Begum, Y. Song, J. Rienzie, and L. Ragolia</i> | C42 |
| Regulation of $\text{Na}^+/\text{Ca}^{2+}$ exchange activity by cytosolic Ca^{2+} in transfected Chinese hamster ovary cells
<i>Y. Fang, M. Condrescu, and J. P. Reeves</i> | C50 |
| Lasp-1 is a regulated phosphoprotein within the cAMP signaling pathway in the gastric parietal cell
<i>C. S. Chew, J. A. Parente, Jr., C.-J. Zhou, E. Baranco, and X. Chen</i> | C56 |
| Quantification of myosin heavy chain mRNA in somatic and branchial arch muscles using competitive PCR
<i>H. H. Jung, R. L. Lieber, and A. F. Ryan</i> | C68 |
| A luciferase-engineered cell line for study of cAMP regulation in endothelial cells
<i>J. Xavier-Neto, A. C. Pereira, A. H. Motoyama, and J. E. Krieger</i> | C75 |
| Mechanisms of EGF-induced stimulation of sodium reabsorption by alveolar epithelial cells
<i>S. I. Danto, Z. Borok, X.-L. Zhang, M. Z. Lopez, P. Patel, E. D. Crandall, and R. L. Lubman</i> | C82 |
| Eosinophil major basic protein increases membrane permeability in mammalian urinary bladder epithelium
<i>T. J. Kleine, G. J. Gleich, and S. A. Lewis</i> | C93 |
| Uptake and intracellular fate of L-DOPA in a human intestinal epithelial cell line: Caco-2
<i>M. A. Vieira-Coelho and P. Soares-da-Silva</i> | C104 |
| Extracellular ATP and bradykinin increase cGMP in vascular endothelial cells via activation of PKC
<i>A. F. Castro, C. Amorena, A. Müller, G. Ottaviano, M. T. Tellez-Iñon, and A. C. Taquini</i> | C113 |
| Differential effects of phorbol ester (PMA) on blocker-sensitive ENaCs of frog skin and A6 epithelia
<i>W. J. Els, X. Liu, and S. I. Helman</i> | C120 |
| Regulation of ribosomal DNA transcription by insulin
<i>K. M. Hannan, L. I. Rothblum, and L. S. Jefferson</i> | C130 |
| Unusual degradation of α - β complexes in <i>Xenopus</i> oocytes by β -subunits of <i>Xenopus</i> gastric H-K-ATPase
<i>P.-X. Chen, P. M. Mathews, P. J. Good, B. C. Rossier, and K. Geering</i> | C139 |
| Molecular mechanisms of impaired stimulation of DNA synthesis in cultured hepatocytes of aged rats
<i>S. Kitano, T. W. Fawcett, Y. Yo, and G. S. Roth</i> | C146 |
| Hypertrophy-stimulated myogenic regulatory factor mRNA increases are attenuated in fast muscle of aged quails
<i>D. A. Lowe, T. Lund, and S. E. Alway</i> | C155 |

Rab11a redistributes to apical secretory canaliculus during stimulation of gastric parietal cells <i>B. C. Calhoun, L. A. Lapierre, C. S. Chew, and J. R. Goldenring</i>	C163
Partial restoration of cAMP-stimulated CFTR chloride channel activity in $\Delta F508$ cells by deoxysepergualin <i>C. Jiang, S. L. Fang, Y.-F. Xiao, S. P. O'Connor, S. G. Nadler, D. W. Lee, D. M. Jefferson, J. M. Kaplan, A. E. Smith, and S. H. Cheng</i>	C171
Effects of divalent cations on single-channel conduction properties of <i>Xenopus</i> IP ₃ receptor <i>D.-O. D. Mak and J. K. Foskett</i>	C179
Hypotonicity activates a lanthanide-sensitive pathway for K ⁺ release in A6 epithelia <i>P. De Smet, J. Li, and W. Van Driessche</i>	C189
Ca ²⁺ -sensitizing effects of the mutations at Ile-79 and Arg-92 of troponin T in hypertrophic cardiomyopathy <i>S. Morimoto, F. Yanaga, R. Minakami, and I. Ohtsuki</i>	C200
Tyrosine kinase inhibitors and antioxidants modulate NF- κ B and NOS-II induction in retinal epithelial cells <i>V. Faure, Y. Courtois, and O. Goureau</i>	C208
Expression of an AQP2 Cre recombinase transgene in kidney and male reproductive system of transgenic mice <i>R. D. Nelson, P. Stricklett, C. Gustafson, A. Stevens, D. Ausiello, D. Brown, and D. E. Kohan</i>	C216
Acid-induced responses in hamster chorda tympani and intracellular pH tracking by taste receptor cells <i>R. E. Stewart, V. Lyall, G. M. Feldman, G. L. Heck, and J. A. DeSimone</i>	C227
Na ⁺ -K ⁺ -2Cl ⁻ cotransport in Ehrlich cells: regulation by protein phosphatases and kinases <i>T. Krarup, L. D. Jakobsen, B. S. Jensen, and E. K. Hoffmann</i>	C239
Physiological effects of Na ⁺ /Ca ²⁺ exchanger knockdown by antisense oligodeoxynucleotides in arterial myocytes <i>M. K. Slodzinski and M. P. Blaustein</i>	C251
Mechanical loading regulates NOS expression and activity in developing and adult skeletal muscle <i>J. G. Tidball, E. Lavergne, K. S. Lau, M. J. Spencer, J. T. Stull, and M. Wehling</i>	C260
Modulation of K ⁺ currents in monocytes by VCAM-1 and E-selectin on activated human endothelium <i>M. Colden-Stanfield and E. K. Gallin</i>	C267
Role of laminin-1, collagen IV, and an autocrine factor(s) in regulated secretion by lacrimal acinar cells <i>L. Chen, J. D. Glass, S. C. Walton, and G. W. Laurie</i>	C278
Ca ²⁺ and protein kinase C activation of mucin granule exocytosis in permeabilized SPOC1 cells <i>C. E. Scott, L. H. Abdullah, and C. W. Davis</i>	C285
PKC regulation of cardiac CFTR Cl ⁻ channel function in guinea pig ventricular myocytes <i>L. M. Middleton and R. D. Harvey</i>	C293
Effect of in vivo corticosteroids on Na ⁺ transport across airway epithelia <i>B. R. Grubb and R. C. Boucher</i>	C303
Reaction of nitric oxide with superoxide inhibits basolateral K ⁺ channels in the rat CCD <i>M. Lu and W.-H. Wang</i>	C309

MODELING IN PHYSIOLOGY

Theoretical insights into the mechanism of spiral Ca ²⁺ wave initiation in <i>Xenopus</i> oocytes <i>G. Dupont</i>	C317
--	------

RAPID COMMUNICATION

Glutathione permeability of CFTR <i>P. Linsdell and J. W. Hanrahan</i>	C323
---	------

INVITED REVIEW

Ion channels in microglia (brain macrophages) <i>C. Eder</i>	C327
<hr/>	
Glibenclamide blocks volume-sensitive Cl^- channels by dual mechanisms <i>Y. Liu, S. Oiki, T. Tsumura, T. Shimizu, and Y. Okada</i>	C343
L-Arginine inhibits vasopressin-stimulated mesangial cell Ca^{2+} <i>L. Balsam and N. Nikbakht</i>	C352
Swelling-activated cation-selective channels in A6 epithelia are permeable to large cations <i>J. Li, P. De Smet, D. Jans, J. Simaels, and W. Van Driessche</i>	C358
A rat parotid gland cell line, Par-C10, exhibits neurotransmitter-regulated transepithelial anion secretion <i>J. T. Turner, R. S. Redman, J. M. Camden, L. A. Landon, and D. O. Quissell</i>	C367
Effects of BAPTA on force and Ca^{2+} transient during isometric contraction of frog muscle fibers <i>Y.-B. Sun, C. Caputo, and K. A. P. Edman</i>	C375
Uptake and metabolism of biotin by human peripheral blood mononuclear cells <i>J. Zempleni and D. M. Mock</i>	C382
Effects of local anesthetics on Na^+ channels containing the equine hyperkalemic periodic paralysis mutation <i>R. L. Sah, R. G. Tsushima, and P. H. Backx</i>	C389
Cloning and characterization of fiber type-specific ryanodine receptor isoforms in skeletal muscles of fish <i>J. P. C. Franck, J. Morrisette, J. E. Keen, R. L. Londraville, M. Beamsley, and B. A. Block</i>	C401
Intracellular ionic strength regulates the volume sensitivity of a swelling-activated anion channel <i>C. L. Cannon, S. Basavappa, and K. Strange</i>	C416
Differential inhibition of $\text{Na}^+/\text{Ca}^{2+}$ exchanger isoforms by divalent cations and isothiourea derivative <i>T. Iwamoto and M. Shigekawa</i>	C423
Topological analysis of NHE1, the ubiquitous Na^+/H^+ exchanger using chymotryptic cleavage <i>L. D. Shrode, B. S. Gan, S. J. A. D'Souza, J. Orlowski, and S. Grinstein</i>	C431
Neuropeptide Y inhibits ciliary beat frequency in human ciliated cells via nPKC, independently of PKA <i>L. B. Wong, C. L. Park, and D. B. Yeates</i>	C440
Purification and reconstitution of an outwardly rectified Cl^- channel from tracheal epithelia <i>B. Jovov, V. G. Shlyonsky, B. K. Berdiev, I. I. Ismailov, and D. J. Benos</i>	C449
$\text{Na}^+/\text{Ca}^{2+}$ exchange in neonatal rat heart cells: antisense inhibition and protein half-life <i>M. K. Slodzinski and M. P. Blaustein</i>	C459
cGMP-independent mechanism of airway smooth muscle relaxation induced by S-nitrosoglutathione <i>W. J. Perkins, C. Pabelick, D. O. Warner, and K. A. Jones</i>	C468
Myocardial gene reprogramming associated with a cardiac cross-resistant state induced by LPS preconditioning <i>X. Meng, J. M. Brown, L. Ao, R. T. Rowland, S. K. Nordeen, A. Banerjee, and A. H. Harken</i>	C475
Distinct Ca^{2+} - and cAMP-dependent anion conductances in the apical membrane of polarized T84 cells <i>D. Merlin, L. Jiang, G. R. Strohmeier, A. Nusrat, S. L. Alper, W. I. Lencer, and J. L. Madara</i>	C484

Mitochondrial uncoupling protein may participate in futile cycling of pyruvate and other monocarboxylates <i>P. Ježek and J. Borecký</i>	C496
Growth hormone regulates the distribution of L-type calcium channels in rat adipocyte membranes <i>S. Gaur, M. E. Morton, G. P. Frick, and H. M. Goodman</i>	C505
Human cytomegalovirus infection stimulates $\text{Cl}^-/\text{HCO}_3^-$ exchanger activity in human fibroblasts <i>L. M. Maglova, W. E. Crowe, A. A. Altamirano, and J. M. Russell</i>	C515
p38 Mitogen-activated protein kinase expression and activation in smooth muscle <i>J. C. Hedges, I. A. Yamboliev, M. Ngo, B. Horowitz, L. P. Adam, and W. T. Gerthoffer</i>	C527
PKC activity modulates availability and long openings of L-type Ca^{2+} channels in A7r5 cells <i>C. A. Obejero-Paz, M. Auslender, and A. Scarpa</i>	C535
Overexpression of protein kinase C- δ increases tight junction permeability in LLC-PK ₁ epithelia <i>J. M. Mullin, J. A. Kampherstein, K. V. Laughlin, C. E. K. Clarkin, R. D. Miller, Z. Szallasi, B. Kachar, A. P. Soler, and D. Rossion</i>	C544
Extracellular-regulated protein kinase cascades are activated in response to injury in human skeletal muscle <i>D. Aronson, J. F. P. Wojtaszewski, A. Thorell, J. Nygren, D. Zangen, E. A. Richter, O. Ljungqvist, R. A. Fielding, and L. J. Goodyear</i>	C555
Characterization of PKA isoforms and kinase-dependent activation of chloride secretion in T84 cells <i>A. K. Singh, K. Taskén, W. Walker, R. A. Frizzell, S. C. Watkins, R. J. Bridges, and N. A. Bradbury</i>	C562
Regulation of K_{Ca} current by store-operated Ca^{2+} influx depends on internal Ca^{2+} release in HSG cells <i>X. Liu, E. Rojas, and I. S. Ambudkar</i>	C571
Myosin heavy chain isoform expression in rat smooth muscle development <i>S. L. White, M. Y. Zhou, R. B. Low, and M. Periasamy</i>	C581
Expression of the transforming growth factor- β gene during growth inhibition following polyamine depletion <i>A. R. Patel, J. Li, B. L. Bass, and J.-Y. Wang</i>	C590
Activation of ΔF508 CFTR in an epithelial monolayer <i>Z. Bebök, C. J. Venglarik, Z. Pánczél, T. Jilling, K. L. Kirk, and E. J. Sorscher</i>	C599
Two MCAT elements of the SM α -actin promoter function differentially in SM vs. non-SM cells <i>E. A. Swartz, A. D. Johnson, and G. K. Owens</i>	C608

SPECIAL COMMUNICATION

Using gadolinium to identify stretch-activated channels: technical considerations <i>R. A. Caldwell, H. F. Clemo, and C. M. Baumgarten</i>	C619
---	------

No. 3. SEPTEMBER 1998

INVITED REVIEW

The mechanism of IL-5 signal transduction <i>T. Adachi and R. Alam</i>	C623
---	------

EDITORIAL FOCUS

<i>Stepping back and looking forward: downregulation of G proteins as a mechanism of desensitization in tissues. Focus on "Carbachol-induced desensitization of PLC-β pathway in rat myometrium: downregulation of $\text{G}_q\alpha/\text{G}_{11}\alpha$"</i> <i>J. R. Jasper</i>	C634
---	------

- Carbachol-induced desensitization of PLC- β pathway in rat myometrium: downregulation of $G_{\alpha}/G_{11\alpha}$
S. Lajat, S. Harbon, and Z. Tanfin C636
- Voltage-dependent block of endothelial volume-regulated anion channels by calix[4]arenes
G. Droogmans, J. Prenen, J. Eggermont, T. Voets, and B. Nilius C646
- Prostaglandin $F_{2\alpha}$ stimulates CFTR activity by PKA- and PKC-dependent phosphorylation
K. A. Yurko-Mauro and W. W. Reenstra C653
- Age-associated increase in PGE₂ synthesis and COX activity in murine macrophages is reversed by vitamin E
D. Wu, C. Mura, A. A. Beharka, S. N. Han, K. E. Paulson, D. Hwang, and S. N. Meydani C661
- Functional expression of putative H⁺-K⁺-ATPase from guinea pig distal colon
S. Asano, S. Hoshina, Y. Nakaie, T. Watanabe, M. Sato, Y. Suzuki, and N. Takeguchi C669
- GLP-1 action in L6 myotubes is via a receptor different from the pancreatic GLP-1 receptor
H. Yang, J. M. Egan, Y. Wang, C. D. Moyes, J. Roth, M. H. Montrose, and C. Montrose-Rafizadeh C675
- Differences in contractile protein content and isoforms in phasic and tonic smooth muscles
P. T. Szymanski, T. K. Chacko, A. S. Rovner, and R. K. Goyal C684
- Regulation of apical membrane Na⁺/H⁺ exchangers NHE2 and NHE3 in intestinal epithelial cell line C2/bbe
R. L. McSwine, M. W. Musch, C. Bookstein, Y. Xie, M. Rao, and E. B. Chang C693
- α -Adrenergic receptors regulate human lymphocyte amiloride-sensitive sodium channels
J. K. Bubien, T. Cornwell, A. L. Bradford, C. M. Fuller, M. D. DuVall, and D. J. Benos C702
- Polarity, integrin, and extracellular matrix dynamics in the postischemic rat kidney
A. Zuk, J. V. Bonventre, D. Brown, and K. S. Matlin C711
- Optical measurement of stimulus-evoked membrane dynamics in single pancreatic acinar cells
D. R. Giovannucci, D. I. Yule, and E. L. Stuenkel C732
- Induction of Mn SOD in human monocytes without inflammatory cytokine production by a mutant endotoxin
L. Tian, J. E. White, H.-Y. Lin, V. S. Haran, J. Sacco, G. Chikkappa, F. B. Davis, P. J. Davis, and M.-F. Tsan C740
- Conductive pathways for chloride and oxalate in rabbit ileal brush-border membrane vesicles
R. W. Freel, M. Hatch, and N. D. Vaziri C748
- Regulation by retinoids of P2Y₂ nucleotide receptor mRNA in human uterine cervical cells
G. I. Gorodeski, P. Burfeind, S. U. Gan, D. Pal, and F. W. Abdul-Karim C758
- Interstitial ATP level and degradation in control and postmyocardial infarcted rats
A. I. Kuzmin, V. L. Lakomkin, V. I. Kapelko, and G. Vassort C766
- Stimulation of Na⁺-K⁺-2Cl⁻ cotransporter in neuronal cells by excitatory neurotransmitter glutamate
D. Sun and S. G. Murali C772
- Inducible expression of protein kinase C α suppresses steroidogenesis in Y-1 adrenocortical cells
M. E. Reyland, D. L. Williams, and E. K. White C780
- PKA induces Ca²⁺ release and enhances ciliary beat frequency in a Ca²⁺-dependent and -independent manner
A. Braiman, O. Zagoory, and Z. Priel C790
- Rho GTPase signaling regulates tight junction assembly and protects tight junctions during ATP depletion
S. Gopalakrishnan, N. Raman, S. J. Atkinson, and J. A. Marrs C798

Effect of intracellular pH on acetylcholine-induced Ca^{2+} waves in mouse pancreatic acinar cells <i>A. González, F. Pfeiffer, A. Schmid, and I. Schulz</i>	C810
Mechanical loading regulates expression of talin and its mRNA, which are concentrated at myotendinous junctions <i>J. Frenette and J. G. Tidball</i>	C818
Mechanism of depression in cardiac sarcolemmal Na^+ - K^+ -ATPase by hypochlorous acid <i>K. Kato, Q. Shao, V. Elimban, A. Lukas, and N. S. Dhalla</i>	C826
Effect of Bcl-2 on oxidant-induced cell death and intracellular Ca^{2+} mobilization <i>M. Ichimiya, S. H. Chang, H. Liu, I. K. Berezesky, B. F. Trump, and P. A. Amstad</i>	C832
Tissue distribution of immunoreactive mouse extracellular superoxide dismutase <i>T. Ookawara, N. Imazeki, O. Matsubara, T. Kizaki, S. Oh-Ishi, C. Nakao, Y. Sato, and H. Ohno</i>	C840
Characterization of the cloned human intermediate-conductance Ca^{2+} -activated K^+ channel <i>B. S. Jensen, D. Strøbæk, P. Christophersen, T. D. Jørgensen, C. Hansen, A. Silahatoglu, S.-P. Olesen, and P. K. Ahring</i>	C848
The <i>opt1</i> gene of <i>Drosophila melanogaster</i> encodes a proton-dependent dipeptide transporter <i>G. Roman, V. Meller, K. H. Wu, and R. L. Davis</i>	C857
Control of AMP deaminase 1 binding to myosin heavy chain <i>I. Hisatome, T. Morisaki, H. Kamma, T. Sugama, H. Morisaki, A. Ohtahara, and E. W. Holmes</i>	C870
Dichotomous development of the organic anion transport protein in liver and choroid plexus <i>R. H. Angeletti, A. J. Bergwerk, P. M. Novikoff, and A. W. Wolkoff</i>	C882
Estrogen increases the permeability of the cultured human cervical epithelium by modulating cell deformability <i>G. I. Gorodeski</i>	C888

SPECIAL COMMUNICATION

Correction for inner filter effects in turbid samples: fluorescence assays of mitochondrial NADH <i>S. A. French, P. R. Territo, and R. S. Balaban</i>	C900
---	------

No. 4. OCTOBER 1998

EDITORIAL FOCUS

Focus on "Exocytosis is not involved in activation of Cl^- secretion via CFTR in Calu-3 airway epithelial cells" <i>W. B. Guggino</i>	C911
Exocytosis is not involved in activation of Cl^- secretion via CFTR in Calu-3 airway epithelial cells <i>J. Löffing, B. D. Moyer, D. McCoy, and B. A. Stanton</i>	C913
Collagen gel overlay induces apoptosis of polarized cells in cultures: disoriented cell death <i>M.-J. Tang, J.-J. Hu, H.-H. Lin, W.-T. Chiu, and S.-T. Jiang</i>	C921
Monocyte/macrophages evoke epithelial dysfunction: indirect role of tumor necrosis factor- α <i>M. Zareie, D. M. McKay, G. G. Kovarik, and M. H. Perdue</i>	C932
Functional and molecular identification of a novel chloride conductance in canine colonic smooth muscle <i>G. M. Dick, K. K. Bradley, B. Horowitz, J. R. Hume, and K. M. Sanders</i>	C940

In vivo and in vitro induction of <i>c-fos</i> in avian exocrine salt gland cells <i>J.-P. Hildebrandt, R. Gerstberger, and M. Schwarz</i>	C951
Cystic fibrosis transmembrane conductance regulator activation by cAMP-independent mechanisms <i>Z. He, S. Raman, Y. Guo, and W. W. Reenstra</i>	C958
Electrophysiological characteristics of the proton-coupled peptide transporter PEPT2 cloned from rat brain <i>H. Wang, Y.-J. Fei, V. Ganapathy, and F. H. Leibach</i>	C967
Expression of myosin isoforms in smooth muscle cells in the corpus cavernosum penis <i>M. E. DiSanto, Z. Wang, C. Menon, Y. Zheng, T. Chacko, J. Hypolite, G. Broderick, A. J. Wein, and S. Chacko</i>	C976
Cytokine-mediated PGE ₂ expression in human colonic fibroblasts <i>E. C. Kim, Y. Zhu, V. Andersen, D. Sciaky, H. J. Cao, H. Meekins, T. J. Smith, and P. Lance</i>	C988
Characterization of two Mg ²⁺ transporters in sealed plasma membrane vesicles from rat liver <i>C. Cefaratti, A. Romani, and A. Scarpa</i>	C995
Gating kinetics of <i>Shaker</i> K ⁺ channels are differentially modified by general anesthetics <i>A. M. Correa</i>	C1009
Energy-dependent redox state of heme <i>a</i> + <i>a</i> ₃ and copper of cytochrome oxidase in perfused rat brain in situ <i>A. Matsunaga, Y. Nomura, S. Kuroda, M. Tamura, J. Nishihira, and N. Yoshimura</i>	C1022
Ascorbate and glutathione homeostasis in vascular smooth muscle cells: cooperation with endothelial cells <i>I. Voskoboinik, K. Söderholm, and I. A. Cotgreave</i>	C1031
Cytosolic pH regulates G _{Cl} through control of phosphorylation states of CFTR <i>M. M. Reddy, R. R. Kopito, and P. M. Quinton</i>	C1040
Cl ⁻ transport in an immortalized human epithelial cell line (NCM460) derived from the normal transverse colon <i>J. Sahi, S. G. Nataraja, T. J. Layden, J. L. Goldstein, M. P. Moyer, and M. C. Rao</i>	C1048
NF-κB inactivation converts a hepatocyte cell line TNF-α response from proliferation to apoptosis <i>Y. Xu, S. Bialik, B. E. Jones, Y. Iimuro, R. N. Kitsis, A. Srinivasan, D. A. Brenner, and M. J. Czaja</i>	C1058
Modeling cell volume regulation in nonexcitable cells: the roles of the Na ⁺ pump and of cotransport systems <i>J. A. Hernández and E. Cristina</i>	C1067
A role for MAP kinase in differentiated smooth muscle contraction evoked by α-adrenoceptor stimulation <i>C. Dessy, I. Kim, C. L. Sougnéz, R. Laporte, and K. G. Morgan</i>	C1081
Heme oxygenase-1 induction in skeletal muscle cells: hemin and sodium nitroprusside are regulators in vitro <i>M. J. J. Vesely, D. J. Exon, J. E. Clark, R. Foresti, C. J. Green, and R. Motterlini</i>	C1087
Minor role of a Ca ²⁺ -depleted sarcoplasmic reticulum in heterologous desensitization of smooth muscle to K ⁺ <i>R. L. Wardle and R. A. Murphy</i>	C1095
Hypotonicity activates transcription through ERK-dependent and -independent pathways in renal cells <i>Z. Zhang, X.-Y. Yang, and D. M. Cohen</i>	C1104
Identification of the pH sensor and activation by chemical modification of the ClC-2G Cl ⁻ channel <i>K. Stroffekova, E. Y. Kupert, D. H. Malinowska, and J. Cuppoletti</i>	C1113

Early changes in muscle fiber size and gene expression in response to spinal cord transection and exercise <i>E. E. Dupont-Versteegden, J. D. Houle, C. M. Gurley, and C. A. Peterson</i>	C1124
Proton secretion in the male reproductive tract: involvement of Cl ⁻ -independent HCO ₃ ⁻ transport <i>S. Breton, K. Hammar, P. J. S. Smith, and D. Brown</i>	C1134
Increased NHE2 expression in rat intestinal epithelium during ontogeny is transcriptionally mediated <i>J. F. Collins, P. R. Kiela, H. Xu, J. Zeng, and F. K. Ghishan</i>	C1143
Localization and expression of AQP5 in cornea, serous salivary glands, and pulmonary epithelial cells <i>H. Funaki, T. Yamamoto, Y. Koyama, D. Kondo, E. Yaoita, K. Kawasaki, H. Kobayashi, S. Sawaguchi, H. Abe, and I. Kihara</i>	C1151

SPECIAL COMMUNICATIONS

Loading pyranine via purinergic receptors or hypotonic stress for measurement of cytosolic pH by imaging <i>B. S. Gan, E. Krump, L. D. Shrode, and S. Grinstein</i>	C1158
Purification of active Na ⁺ -K ⁺ -ATPase using a new ouabain-affinity column <i>D. R. Yingst, S.-Y. Yang, and R. Schiebinger</i>	C1167

ANNOUNCEMENTS

C1178

No. 5. NOVEMBER 1998

EDITORIAL FOCUS

<i>Can ENaC regulate ICF as well as ECF volume? Focus on "Osmotic pressure regulates αβγ-rENaC expressed in Xenopus oocytes"</i> <i>A. A. McDonough</i>	C1179
Osmotic pressure regulates αβγ-rENaC expressed in <i>Xenopus</i> oocytes <i>H.-L. Ji, C. M. Fuller, and D. J. Benos</i>	C1182
<i>Cell checkpoints and enterocyte differentiation: a recipe for sequential stages. Focus on "Caco-2 intestinal cell differentiation is associated with G₁ arrest and suppression of CDK2 and CDK4"</i> <i>J. M. Carethers</i>	C1191
Caco-2 intestinal cell differentiation is associated with G ₁ arrest and suppression of CDK2 and CDK4 <i>Q.-M. Ding, T. C. Ko, and B. M. Evers</i>	C1193
Effects of cGMP and sodium nitroprusside on odor responses in turtle olfactory sensory neurons <i>K. Inamura, M. Kashiwayanagi, and K. Kurihara</i>	C1201
Intracellular signaling leads to the hypertrophic effect of neuropeptide Y <i>Y. Goldberg, G. Taimor, H. M. Piper, and K.-D. Schlüter</i>	C1207
Regulation of angiotensin II-induced JAK2 tyrosine phosphorylation: roles of SHP-1 and SHP-2 <i>M. B. Marrero, V. J. Venema, H. Ju, D. C. Eaton, and R. C. Venema</i>	C1216
Partial agonists and antagonists reveal a second permeability state of human lymphocyte P2Z/P2X ₇ channel <i>J. S. Wiley, C. E. Gargett, W. Zhang, M. B. Snook, and G. P. Jamieson</i>	C1224
Amino acid effects on translational repressor 4E-BP1 are mediated primarily by L-leucine in isolated adipocytes <i>H. L. Fox, P. T. Pham, S. R. Kimball, L. S. Jefferson, and C. J. Lynch</i>	C1232
Role of the α-subunit ³²⁶ GRV sequence in the surface expression of fibrinogen and vitronectin receptors <i>M. Ferrer, M. S. Ayuso, N. Butta, R. Parrilla, and C. González-Manchón</i>	C1239

- Stretch activates heparin-binding EGF-like growth factor expression in bladder smooth muscle cells
J. M. Park, J. G. Borer, M. R. Freeman, and C. A. Peters C1247
- Sphingosylphosphorylcholine stimulates mitogen-activated protein kinase via a Ca^{2+} -dependent pathway
T.-Y. Chin and S.-H. Chueh C1255
- Human calcitonin receptor is directly targeted to and retained in the basolateral surface of MDCK cells
D. R. Nussenzveig, M. F. C. Matos, and C. N. Thaw C1264
- ADP-ribose gates the fertilization channel in ascidian oocytes
M. Wilding, G. L. Russo, A. Galione, M. Marino, and B. Dale C1277
- Pseudomonas aeruginosa* induces changes in fluid transport across airway surface epithelia
D. J. Evans, P. S. Matsumoto, J. H. Widdicombe, C. Li-Yun, A. A. Maminishkis, and S. S. Miller C1284
- Tyrosine kinase-deficient W^c c-kit induces mast cell adhesion and chemotaxis
J. Dastyg, D. Taub, M. C. Hardison, and D. D. Metcalfe C1291
- Luminal L-alanine stimulates exocytosis at the K^+ -conductive apical membrane of *Aplysia* enterocytes
J. Denton, D. Boahene, and W. M. Moran C1300
- Hydrogen peroxide inhibits cAMP-induced Cl^- secretion across colonic epithelial cells
M. D. DuVall, Y. Guo, and S. Matalon C1313
- An immunologically distinct β -adapin on tubulovesicles of gastric oxyntic cells
C. T. Okamoto and Y. Y. Jeng C1323
- Na^+ - K^+ - Cl^- cotransport in human fibroblasts is inhibited by cytomegalovirus infection
L. M. Maglova, W. E. Crowe, P. R. Smith, A. A. Altamirano, and J. M. Russell C1330
- Analysis of a Ca^{2+} -activated K^+ channel that mediates hyperpolarization via the thrombin receptor pathway
R. Sullivan, S. K. Koliwad, and D. L. Kunze C1342
- Regulation of cytoskeletal mechanics and cell growth by myosin light chain phosphorylation
S. Cai, L. Pestic-Dragovich, M. E. O'Donnell, N. Wang, D. Ingber, E. Elson, and P. de Lanerolle C1349
- Antisense oligonucleotide to PKC- ϵ alters cAMP-dependent stimulation of CFTR in Calu-3 cells
C. M. Liedtke and T. S. Cole C1357
- Biotin uptake by human colonic epithelial NCM460 cells: a carrier-mediated process shared with pantothenic acid
H. M. Said, A. Ortiz, E. McCloud, D. Dyer, M. P. Moyer, and S. Rubin C1365
- ATP-dependent regulation of inwardly rectifying K^+ current in bovine retinal pigment epithelial cells
B. A. Hughes and M. Takahira C1372
- Molecular dissection of a basic COOH-terminal domain of Cx32 that inhibits gap junction gating sensitivity
X. G. Wang and C. Peracchia C1384

SPECIAL COMMUNICATION

- Bioluminescence detection of ATP release mechanisms in epithelia
A. L. Taylor, B. A. Kudlow, K. L. Marrs, D. C. Gruenert, W. B. Guggino, and E. M. Schwiebert C1391

No. 6. DECEMBER 1998

EDITORIAL FOCUS

- Focus on "G protein-dependent activation of smooth muscle eNOS via natriuretic peptide clearance receptor"
J. J. Galligan C1407

G protein-dependent activation of smooth muscle eNOS via natriuretic peptide clearance receptor <i>K. S. Murthy, B.-Q. Teng, J.-G. Jin, and G. M. Makhoul</i>	C1409
<i>Regulating epithelia from the apical side: new insights. Focus on "Differential signaling and regulation of apical vs. basolateral EGFR in polarized epithelial cells"</i> <i>K. J. Karnaky, Jr.</i>	C1417
Differential signaling and regulation of apical vs. basolateral EGFR in polarized epithelial cells <i>S. K. Kuwada, K. A. Lund, X. F. Li, P. Clifton, K. Amsler, L. K. Opreko, and H. S. Wiley</i>	C1419
<hr/>	
Membrane lipid diffusion and band 3 protein changes in human erythrocytes due to acute hypobaric hypoxia <i>G. Celedón, G. González, C. P. Sotomayor, and C. Behn</i>	C1429
K-Cl cotransporter expression in the human kidney <i>H. Liapis, M. Nag, and D. M. Kaji</i>	C1432
Effect of serum and mechanical stretch on skeletal α -actin gene regulation in cultured primary muscle cells <i>J. A. Carson and F. W. Booth</i>	C1438
Functional characterization of alternatively spliced human SERCA3 transcripts <i>E. Poch, S. Leach, S. Snape, T. Cacic, D. H. MacLennan, and J. Lytton</i>	C1449
A water channel of the nematode <i>C. elegans</i> and its implications for channel selectivity of MIP proteins <i>M. Kuwahara, K. Ishibashi, Y. Gu, Y. Terada, Y. Kohara, F. Marumo, and S. Sasaki</i>	C1459
Blockade by cAMP of native sodium channels of adult rat skeletal muscle fibers <i>J.-F. Desaphy, A. De Luca, and D. C. Camerino</i>	C1465
Cell-cell contact between adult rat cardiac myocytes regulates Kv1.5 and Kv4.2 K ⁺ channel mRNA expression <i>K. M. Hershman and E. S. Levitan</i>	C1473
Effect of PCMBs on CO ₂ permeability of <i>Xenopus</i> oocytes expressing aquaporin 1 or its C189S mutant <i>G. J. Cooper and W. F. Boron</i>	C1481
Rapid stimulation of glucose transport by mitochondrial uncoupling depends in part on cytosolic Ca ²⁺ and cPKC <i>Z. A. Khayat, T. Tsakiridis, A. Ueyama, R. Somwar, Y. Ebina, and A. Klip</i>	C1487
Selective hydrolysis of plasmalogens in endothelial cells following thrombin stimulation <i>M. H. Creer and J. McHowat</i>	C1498
Thyroid hormone modifies mitochondrial phenotype by increasing protein import without altering degradation <i>E. E. Craig, A. Chesley, and D. A. Hood</i>	C1508
Zinc deficiency decreases plasma level and hepatic mRNA abundance of apolipoprotein A-I in rats and hamsters <i>J. Y. J. Wu, S. K. Reaves, Y. R. Wang, Y. Wu, P. P. Lei, and K. Y. Lei</i>	C1516
Ca ²⁺ depolarizes adrenal cortical cells through selective inhibition of an ATP-activated K ⁺ current <i>J. C. Gomora and J. J. Enyeart</i>	C1526
Human monocyte stimulus-coupled IL-1 β posttranslational processing: modulation via monovalent cations <i>D. G. Perregaux and C. A. Gabel</i>	C1538
Contraction-induced injury to single muscle fibers: velocity of stretch does not influence the force deficit <i>G. S. Lynch and J. A. Faulkner</i>	C1548
Characterization of CFTR expression and chloride channel activity in human endothelia <i>A. Tousson, B. A. Van Tine, A. P. Naren, G. M. Shaw, and L. M. Schwiebert</i>	C1555
Functional demonstration of Na ⁺ -K ⁺ -2Cl ⁻ cotransporter activity in isolated, polarized choroid plexus cells <i>Q. Wu, E. Delpire, S. C. Hebert, and K. Strange</i>	C1565

Endogenous expression of the renal high-affinity H ⁺ -peptide cotransporter in LLC-PK ₁ cells <i>U. Wenzel, D. Diehl, M. Herget, and H. Daniel</i>	C1573
Neuropeptide regulation of human dermal microvascular endothelial cell ICAM-1 expression and function <i>K. L. Quinlan, I.-S. Song, N. W. Bunnett, E. Letran, M. Steinhoff, B. Harten, J. E. Olerud, C. A. Armstrong, S. W. Caughman, and J. C. Ansel</i>	C1580
Fluid shear-induced mechanical signaling in MC3T3-E1 osteoblasts requires cytoskeleton-integrin interactions <i>F. M. Pavalko, N. X. Chen, C. H. Turner, D. B. Burr, S. Atkinson, Y.-F. Hsieh, J. Qiu, and R. L. Duncan</i>	C1591
Expression of TWIK-1, a novel weakly inward rectifying potassium channel in rat kidney <i>F. Cluzeaud, R. Reyes, B. Escoubet, M. Fay, M. Lazdunski, J. P. Bonvalet, F. Lesage, and N. Farman</i>	C1602
Adrenergic stimulation of Na ⁺ transport across alveolar epithelial cells involves activation of apical Cl ⁻ channels <i>X. Jiang, D. H. Ingbar, and S. M. O'Grady</i>	C1610
Relationship between [¹²⁵ I]RTI-55-labeled cocaine binding sites and the serotonin transporter in rat placenta <i>L. P. Shearman, A. M. McReynolds, F. C. Zhou, and J. S. Meyer</i>	C1621
Taxol inhibits endosomal-lysosomal membrane trafficking at two distinct steps in CV-1 cells <i>M. Sonee, E. Barrón, F. A. Yarber, and S. F. Hamm-Alvarez</i>	C1630
Activation of the JAK-STAT pathway by reactive oxygen species <i>A. R. Simon, U. Rai, B. L. Fanburg, and B. H. Cochran</i>	C1640
Colocalization of glycolytic enzyme activity and K _{ATP} channels in basolateral membrane of <i>Necturus</i> enterocytes <i>W. P. Dubinsky, O. Mayorga-Wark, and S. G. Schultz</i>	C1653
K ⁺ current inhibition by amphiphilic fatty acid metabolites in rat ventricular myocytes <i>Z. Xu and G. J. Rozanski</i>	C1660
Nitric oxide relaxes human myometrium by a cGMP-independent mechanism <i>K. K. Bradley, I. L. O. Buxton, J. E. Barber, T. McGaw, and M. E. Bradley</i>	C1668
Gap junction permeability is diminished in proliferating vascular smooth muscle cells <i>D. T. Kurjiaka, T. D. Steele, M. V. Olsen, and J. M. Burt</i>	C1674

The Journal no longer publishes print subject and author indexes. Full searchability is available in the online version (<http://www.ajpccell.org>).